

Date: Sun, 4 Jul 93 04:30:13 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #818  
To: Info-Hams

Info-Hams Digest                      Sun, 4 Jul 93                      Volume 93 : Issue 818

Today's Topics:

1.2 GHz QUESTION (again) (2 msgs)  
Center-Fed Antennas  
Daily Solar Geophysical Data Broadcast for 03 July  
FT-202R  
Repeater coordination, complaints?  
REQUESTING CUSTOM CALLSIGNS ???  
RG-58 coax cable vs. RG-223  
travel to europe license questions  
Two-Line Orbital Element Set Format

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Sat, 3 Jul 1993 18:12:03 GMT  
From: psinntp!iat.holonet.net!bwilkins@uunet.uu.net  
Subject: 1.2 GHz QUESTION (again)  
To: info-hams@ucsd.edu

easu348@orion.oac.uci.edu (Andrew Schwartz Parker) KD6TGM writes:  
: I posted a similar question a few days back, but only got one response, so I'm  
: trying again. I live in suburban Southern California and I'm thinking about  
: buying the 1.2 GHz module for my Kenwood 741. I've heard many conflicting  
: opinions about 1.2 band in general. I would appreciate any info. at all on  
: this subject since I might buy the module in the next few weeks. Any little  
: bits of information would help in my decision process. Just for info., I'd  
: mostly be working off of high area coverage repeaters (5700 ft. elevation) out  
: of my car. Thanks for the help in advance.

By all means buy the 1280 module. Get a good antenna. You will be pleasantly surprised that the band may work better than the 440 band. The noise floor at the repeater site is far quieter than uhf. No radar or high power pagers getting into the repeater receiver. The folks on 1280 are far friendlier. This band is the fastest growing repeater band in California.

--

Bob Wilkins      n6fri                      voice 440.250+ 100pl san francisco bay area  
bwilkins@holonet.net                      packet n6fri @ n6eeg.#nocal.ca.usa.na

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Date: Sat, 3 Jul 1993 23:03:31 GMT  
From: psinntp!iat.holonet.net!bwilkins@uunet.uu.net  
Subject: 1.2 GHz QUESTION (again)  
To: info-hams@ucsd.edu

marchbg@feenix.metronet.com (Marc Grant) writes:

:  
: 1200 MHz repeaters operate exactly like all the others, except that 1.2  
: is much more susceptible to attenuation by thick trees and shrubs, so it  
: usually works a lot better in the winter.  
:

Most of the thick vegetation died in the smog storm of 68 in southern cal :}

The band really works well in the urban canyons , it really bounces well around 40 story buildings. Signals penetrate well into interiors of concrete and steel structures. There is no intermod from pagers and other out of band signals. At this time there is no computer clock noise.

There are already 75 2.4 GHz repeaters operating in Japan. That band works. We need more activity on our upper bands. Remember 220 - 222 MHz ? In the final analysis no one was using the band. 200 users could not stop progress.

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Bob Wilkins      n6fri                      voice 440.250+ 100pl san francisco bay area  
bwilkins@holonet.net                      packet n6fri @ n6eeg.#nocal.ca.usa.na

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Date: 4 Jul 93 09:39:24 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Center-Fed Antennas

To: info-hams@ucsd.edu

I have tried various lengths of center-fed antennas and various lengths of 300 ohm ladder-line center sections connected to coax with and without baluns. Today I made some measurements at the coax/ladder-line junction without the coax connected and found that the antennas and transmission lines are behaving exactly as they are supposed to in theory.

I measured the resonant frequencies at the coax/ladder-line junction without the coax and found resonances close to integer multiples of  $f=468/\text{Length}$ . I measured impedances and found low resistive impedances at the odd harmonics and high resistive impedances at the even harmonics. All other frequencies had appreciable reactances.

Here's my conclusions: Any antenna similar to the G5RV, (center-fed with a twin-lead matching section connected to coax through a balun or not), has a fundamental resonant frequency close to  $468/\text{Length}$ . The matching section functions according to the equations for series-section transmission lines/transformers and the length of the right-angle matching section does not appreciably affect the resonant frequencies of the antenna. SWR is high except at odd multiples of the fundamental frequency. Any coax in the system is part of a transmission line transformer.

...and it was 111 degrees while I was doing all of this...

73, KG7BK, Cecil\_A\_Moore@ccm.hf.intel.com

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Date: 4 Jul 93 06:35:23 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Daily Solar Geophysical Data Broadcast for 03 July  
To: info-hams@ucsd.edu

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 184, 07/03/93  
10.7 FLUX=110.5 90-AVG=112 SSN=095 BKI=4342 3223 BAI=015  
BGND-XRAY=B3.1 FLU1=\*.E\*\* FLU10=\*.E\*\* PKI=5442 3223 PAI=020  
BOU-DEV=048,037,059,015,021,019,017,021 DEV-AVG=023 NT SWF=01:011  
XRAY-MAX= M1.6 @ 1102UT XRAY-MIN= B2.8 @ 0225UT XRAY-AVG= B7.2  
NEUTN-MAX= +001% @ 1830UT NEUTN-MIN= -004% @ 0510UT NEUTN-AVG= -0.8%  
PCA-MAX= +0.1DB @ 1555UT PCA-MIN= -0.2DB @ 1430UT PCA-AVG= -0.0DB  
BOUTF-MAX=55407NT @ 0110UT BOUTF-MIN=55333NT @ 1921UT BOUTF-AVG=55362NT  
GOES7-MAX=P:+000NT@ 0000UT GOES7-MIN=N:+000NT@ 0000UT G7-AVG=+079,+000,+000  
GOES6-MAX=P:+169NT@ 1637UT GOES6-MIN=N:-125NT@ 0344UT G6-AVG=+105,-027,-071  
FLUXFCST=STD:110,105,105;SESC:110,105,105 BAI/PAI-FCST=015,010,010/015,010,010

KFCST=3344 3332 2233 3322 27DAY-AP=017,020 27DAY-KP=3343 3334 3234 5433  
WARNINGS=\*SWF;\*MAJFLR;\*PROTON;\*PCA  
ALERTS=\*\*MINFLR:M1.6/1N@1102,S13W26(7530)  
!!END-DATA!!

NOTE: The Effective Sunspot Number for 02 JUL 93 was 75.0.  
The Full Kp Indices for 02 JUL 93 are: 5- 3+ 3- 3+ 4- 3o 4- 5+

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Date: Sat, 3 Jul 93 10:31:00 -0500  
From: usc!howland.reston.ans.net!agate!usenet.ins.cwru.edu!ncoast!pcohio!  
gary.gabriel@network.UCSD.EDU  
Subject: FT-202R  
To: info-hams@ucsd.edu

< Paul, GW7KES wrote: >

PJDG>I have the manual which includes a schematic, and calculations for  
PJDG>the crystal frequencies, and all that jazz. If you cannot find any  
PJDG>help in the states, mail me with your snail mail address, And I'll  
PJDG>put a photocopy in the post.

Thanks for the offer. I will see what turns up and then check back with  
you if all else fails.

As for the radio, do you know what the wattage out is ?

73 (from the colonies !)

Gary N8YSV

---  
~ OLX 2.1 TD ~ It's only a hobby ... only a hobby ... only a

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Date: Sat, 3 Jul 1993 20:25:26 GMT  
From: swrinde!gatech!howland.reston.ans.net!darwin.sura.net!knuth.mtsu.edu!raider!  
theporch!jackatak!root@network.UCSD.EDU  
Subject: Repeater coordination, complaints?  
To: info-hams@ucsd.edu

jimv@hienergy.East.Sun.COM (Jim Vienneau - Sun Microsystems) writes:  
>  
> Very cheap for the repeater owner perhaps, but not the users. Perhaps you  
> didn't notice that PL decode is optional on most mobile rigs?  
Ah...excuse me....Jim....you bought a "new" 2 meter mobile rig lately

I think your response is outdated. The \_OLD\_ IC-27A that I bought some 12 or so years ago had PL \*standard\*...bought another IC-27H at a HamFest as another good rig to have and it (obviously?) had PL as a standard feature. Me thinks you must be thinking of the rigs of 15 or more years ago....most of the past 6-8 sure have PL, or NO ONE would buy'em -- which is how come I asked if you got your rig for less than \$100!!! ;^)

Well, if memory serves me well (and at my age, it often does not) "legal limit" for a repeater is constrained NOT by the 1.5KW output limit, but rather by a complex formula involving Height Above Average Terrain -- HAAT....remember that one from your Extra exam?

In Nashville, we hear Huntsville Alabama repeaters, in spite of the intervening miles and mountains. We live with it, as they do. The 34/94 machine here has a fairly hefty "pad" to prevent that problem of having Hunstville stations key up hte Nashville machine.

73

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Date: Sun, 4 Jul 1993 02:45:00 GMT  
From: usc!howland.reston.ans.net!darwin.sura.net!martha.utcc.utk.edu!  
utkvx.utk.edu!rpadawer@network.UCSD.EDU

Subject: REQUESTING CUSTOM CALLSIGNS ???  
To: info-hams@ucsd.edu

I had heard long ago a rumor that the FCC might eventually allow Extra class amateurs to request a specific callsign. There is a specific one I would like... Is there any truth to this rumor? Does anyone think this will happen?

Thanks for any comment.

Randy  
WA4FJF

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Randy Padawer                      P.O. Box 1167                      Knoxville, TN 37902  
Telephone: (615) 637-7263 before 11 pm; leave message if not home.  
Internet: RPADAWER@UTKVMX.UTK.EDU                      or                      GwRepRandy@AOL.COM  
Ham Radio Op: WA4FJF.      Ham Packet: WA4FJF @ N0ARY.#NOCAL.CA.USA.NA  
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Date: 3 Jul 93 18:22:44 GMT  
From: usc!howland.reston.ans.net!gatech!asuvax!ncar!noao!amethyst!  
organpipe.uug.arizona.edu!iris4.chem.Arizona.EDU!dlatimer@network.UCSD.EDU  
Subject: RG-58 coax cable vs. RG-223  
To: info-hams@ucsd.edu

In article <C9Js0v.DMG@hpcvsnz.cv.hp.com>, tomb@lsid.hp.com (Tom Bruhns) writes:  
|> J.D. Cronin (jdc3538@ultb.isc.rit.edu) wrote:  
|>  
|> : What is the difference between RG-58 and RG-223? Both are 50 ohms,  
|> : but RG-223 costs much more. RG-223 has more capacitance per foot,  
|> : so isn't it more lossy? Unfortunately, the ARRL antenna book does  
|> : not list the loss in db/100 ft for RG-223.  
|>  
|> Huh? My reference book lists both at 28.5pF/foot. Expect this for  
|> cables of the same impedance using the same insulation; it's pretty  
|> much a fact of life (unless the inner conductor is coiled to make  
|> a delay line).  
|>  
|> I'd expect slightly lower loss in the 223 because its inner  
|> conductor is solid instead of stranded, and because it's silver  
|> plated instead of tinned. For a discussion about how the  
|> stranded center conductor increases loss, see "RF Design"  
|> magazine of a bit over a year ago for an article, I think  
|> written by a fellow from Andrews Cable. It's a small-  
|> percentage effect.

Working from memory (without safety harness) 223 has a higher voltage rating, a slightly higher capacitance/foot and a tighter (or two layers??) ground weave. The information is in the Belden wire catalog, which I don't have here.

Darin

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Date: 04 Jul 1993 03:58:43 GMT  
From: cronkite.cisco.com!pst@ames.arpa  
Subject: travel to europe license questions  
To: info-hams@ucsd.edu

I'm leaving for europe, and I was wondering what countries will allow me to operate without extensive reciprocol paperwork?

I only have a US Technician+ class license, so I may not qualify for most reciprocal work (I think most nations require a General)...?

I'm going to the UK, France, and Holland, and I was thinking of taking my 220 and 2m/440 radios. Do I need to get permission at embassies or consulate offices before I leave? Is it easy to get permission once I'm already there? Are there cases where I can just use my US callsign w/o any paperwork?

What are legal (and practical) bands that I can use?

I'm leaving monday, and this was sort of a last minute kind of thing. Please email me directly.

Paul

--  
nequaquam vacuum

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Date: Fri, 2 Jul 1993 13:25:18 MDT  
From: usc!math.ohio-state.edu!cyber1.cyberstore.ca!vanbc.wimsey.com!cs.ubc.ca!unixg.ubc.ca!kakwa.ucs.ualberta.ca!ersys!adec23!ve6mgs!usenet@network.UCSD.EDU  
Subject: Two-Line Orbital Element Set Format  
To: info-hams@ucsd.edu

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.misc on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (513)

427-0674, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at 300, 1200, 2400, 4800, or 9600 bps using 8 data bits, 1 stop bit, no parity. In addition, element sets (also updated daily) and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

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Data for each satellite consists of three lines in the following format:

AAAAAAAAAAAA

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1 NNNNU NNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNNNN
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Line 0 is a eleven-character name.

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

Line 1

Column	Description
01-01	Line Number of Element Data
03-07	Satellite Number
10-11	International Designator (Last two digits of launch year)
12-14	International Designator (Launch number of the year)
15-17	International Designator (Piece of launch)
19-20	Epoch Year (Last two digits of year)
21-32	Epoch (Julian Day and fractional portion of the day)
34-43	First Time Derivative of the Mean Motion or Ballistic Coefficient (Depending on ephemeris type)
45-52	Second Time Derivative of Mean Motion (decimal point assumed; blank if N/A)
54-61	BSTAR drag term if GP4 general perturbation theory was used. Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63	Ephemeris type
65-68	Element number
69-69	Check Sum (Modulo 10) (Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2

Column	Description
01-01	Line Number of Element Data
03-07	Satellite Number
09-16	Inclination [Degrees]
18-25	Right Ascension of the Ascending Node [Degrees]
27-33	Eccentricity (decimal point assumed)
35-42	Argument of Perigee [Degrees]



44-51      Mean Anomaly [Degrees]  
53-63      Mean Motion [Revs per day]  
64-68      Revolution number at epoch [Revs]  
69-69      Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6  
1 11416U                86 50.28438588 0.00000140                67960-4 0 5293  
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978

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End of Info-Hams Digest V93 #818

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